

Evaporative Emission Effects (Permeation)

Created by

Ethanol in Gasoline



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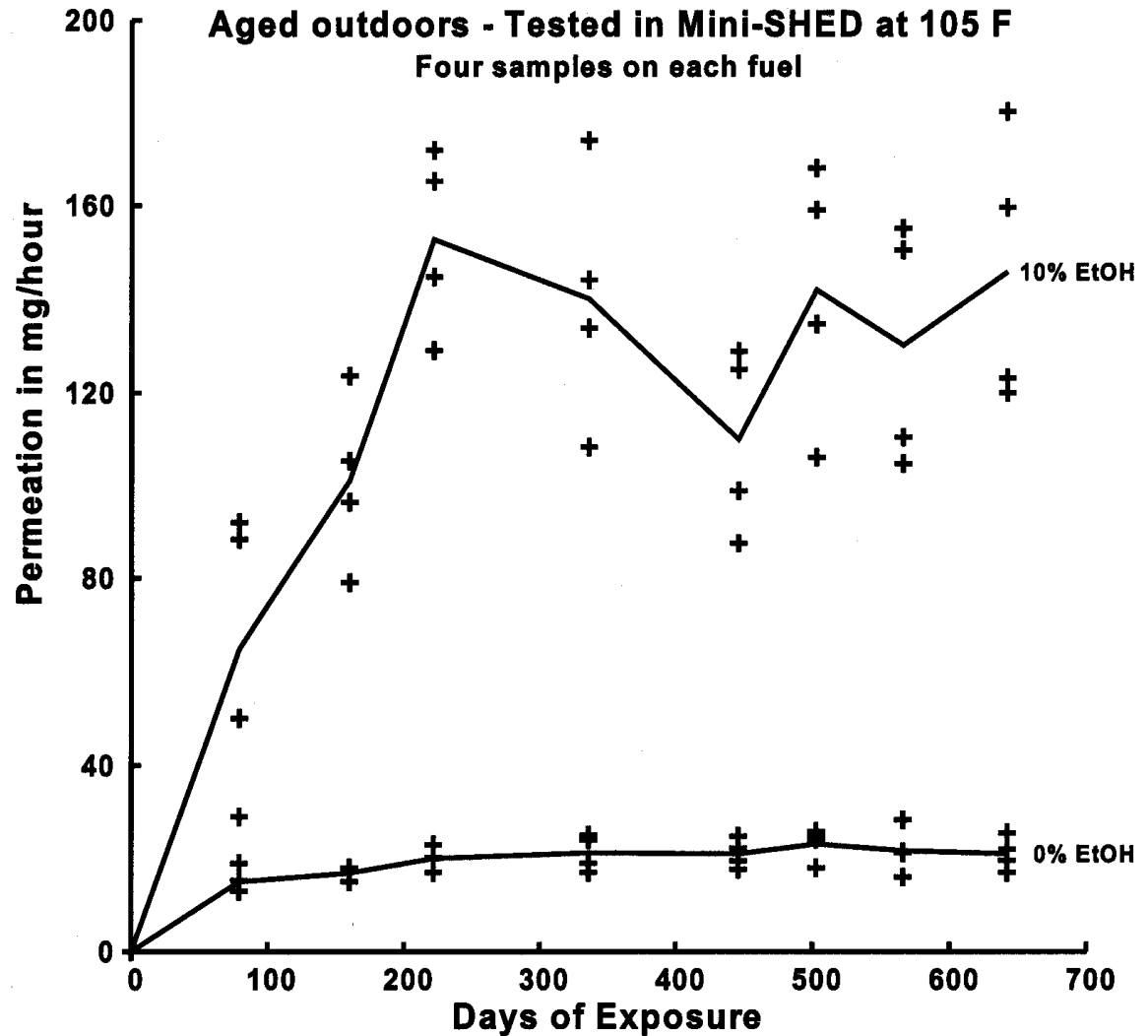


Two Reports Available

arb.ca.gov/cbg/meeting/2001/mtg2001.htm

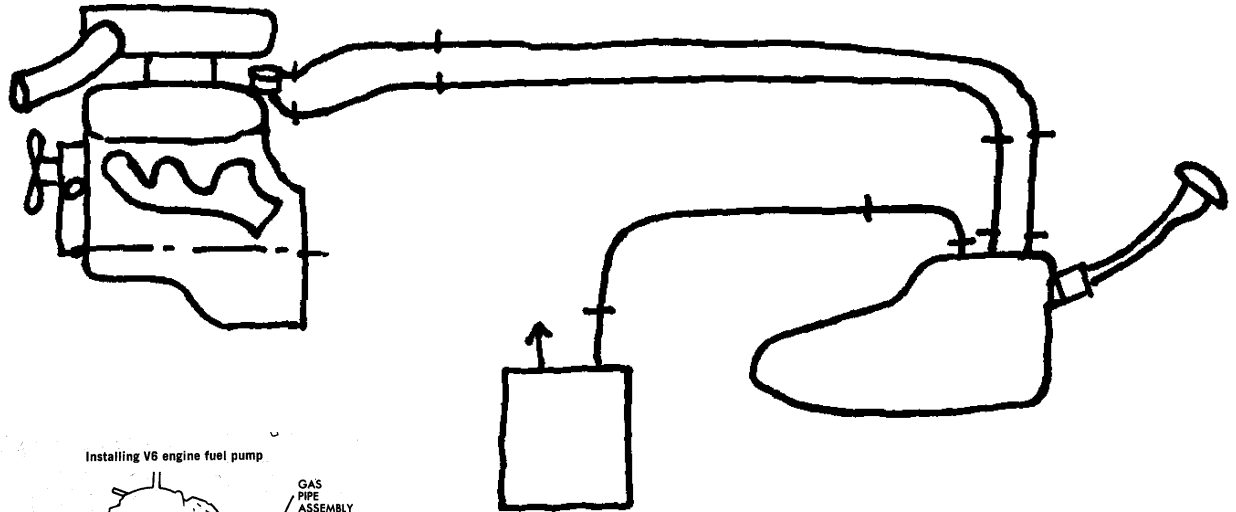
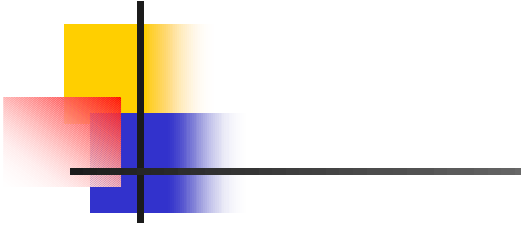
Permeation Effects of EtOH Fuel

1995 Production Evap System

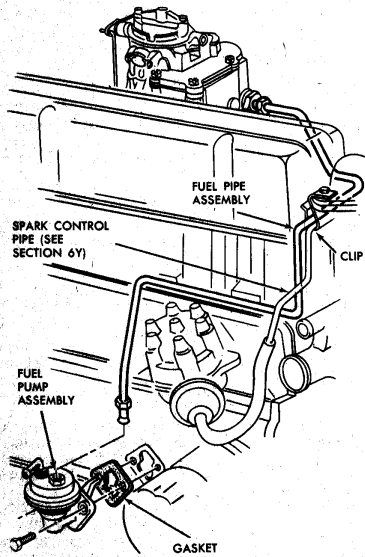


Example of a Test Rig



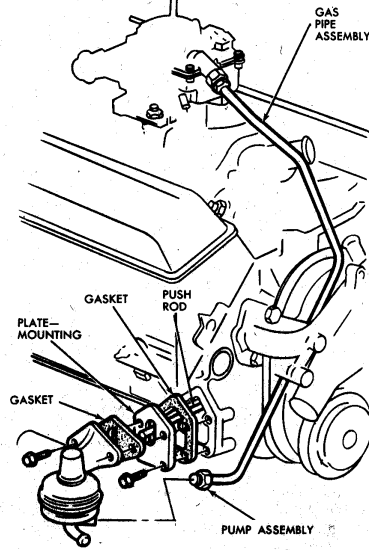


Installing V8 engine fuel pump
(© G.M.C.)



Fuel pump—inline engine (typical)
(© G.M.C.)

Installing V8 engine fuel pump



Fuel pump—V6 engine (typical)
(© G.M.C.)



Suggested 6 Vehicle test Fleet

	1st Choice	2nd Choice
Carburetor		
Metal Tank	1985 Honda Accord	1984 Chev Suburban
Plastic tank	1984 Dodge Pick-up	
TBI		
Metal Tank	1985 Ford Tempo	1989 Chev Suburban
Plastic Tank	1992 Chev Caprice	1989 Sundance
PFI		
Metal Tank	1994 Toyota Camry	1994 Ford Mustang
Plastic Tank	1993 Ford Ranger	1994 Toyota Supra



Test Plan

- "Borrow" the selected vehicles from local California sources
- Carefully remove and reassemble the test components on fabricated test rigs
- Fill with CA Phase II fuel, and restabilize for 60 days at 105°F, periodically testing if desired.
- Test each system for 2 days using the CARB 2 day test diurnal protocol
- Drain and fill with CA "Phase 3" (5.7v% EtOH)
- Age the rig at 105°F, testing for emissions each week, for a total of 26 weeks if the emissions continue to increase over the previous reading



Summary

- A quick test program covering a wide range of vehicles has been suggested.
- The protocol is defined and “good to go.”
- We could start immediately.